

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Currently Amended): An abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising:

a common data storing section for storing, as the abnormality diagnostic data for a plurality of abnormal events, common data which is common against all abnormal events irrespective of the detected abnormal event; and

an inherent data storing section for storing, ~~as the abnormality diagnostic data, in~~ correspondence to the common data inherent data which is associated with and specific to a diagnostic code for each of the abnormal events detected.

Claim 2 (Original): An abnormality diagnostic system according to claim 1, further comprising:

storing means for storing the abnormality diagnosis data;

abnormality judging means for judging an abnormal event when the abnormality is detected;

selecting means for selecting the inherent data corresponding to the judged abnormal event; and

writing means for writing the selected inherent data together with the common data to the storing means as the abnormality diagnostic data corresponding to the abnormal event.

Claim 3 (Original): An abnormality diagnostic system according to claim 2, wherein the common data includes data indicative of behavior of the vehicle.

Claim 4 (Previously Presented): An abnormality diagnostic system according to claim 2, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 5 (Previously Presented): An abnormality diagnostic system according to claim 2, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 6 (Previously Presented): An abnormality diagnostic system according to claim 2, wherein the storing means includes a common storing region in which each of the inherent data can be commonly stored, and

wherein the writing means writes the inherent data to the common storing region.

Claim 7 (Previously Presented): An abnormality diagnostic system according to claim 6, wherein the common data includes data indicative of a behavior of the vehicle.

Claim 8 (Previously Presented): An abnormality diagnostic system according to claim 6, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 9 (Previously Presented): An abnormality diagnostic system according to claim 6, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 10 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the common data includes data indicative of a behavior of the vehicle.

Claim 11 (Previously Presented): An abnormality diagnostic system according to claim 10, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 12 (Previously Presented): An abnormality diagnostic system according to claim 10, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 13 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 14 (Previously Presented): An abnormality diagnostic system according to claim 13, wherein the inherent data includes a plurality of data, and the data length of each data is constant.

Claim 15 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 16 (Currently Amended): An abnormality diagnostic data storing method for storing on a vehicle, in a memory, abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising:

judging an abnormal event when an abnormality is detected;
selecting at least inherent data which is associated with the abnormal event; and
storing selected inherent data in the memory as abnormality diagnostic data
corresponding to the abnormal event for a plurality of abnormal events; and
storing ~~together with~~ said selected inherent data in correspondence to common data
which is common against all abnormal events irrespective of the detected abnormal events,
the selected inherent data associated with and specific to a diagnostic code for the abnormal
event detected.

Claim 17 (Original): An abnormality diagnostic data storing method according to claim 16, wherein the common data includes data indicative of behavior of the vehicle.

Claim 18 (Previously Presented): An abnormality diagnostic data storing method according to claim 16, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 19 (Previously Presented): An abnormality diagnostic data storing method according to claim 16, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 20 (Currently Amended): An abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising:

a processor configured to identify the detected abnormal event with a diagnostic code;

a common data storing section configured to store, as the abnormality diagnostic data for a plurality of abnormal events, common data which is common against all abnormal events irrespective of the detected abnormal event; and

an inherent data storing section configured to store, in correspondence to the common data, data selectively obtained in accordance with the diagnostic code, the data being identified as inherent data ~~to~~ associated with and specific to a diagnostic code for the detected abnormal event.

Claim 21 (Currently Amended): An abnormality diagnostic data storing method for storing on a vehicle, in a memory, abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising:

identifying a detected abnormal event with a corresponding diagnostic code;

selecting, based on the diagnostic code corresponding to the detected abnormal event, at least inherent data which is associated with the detected abnormal event;

storing the selected inherent data in the memory as abnormality diagnostic data corresponding to the detected abnormal event for a plurality of abnormal events; and

storing, together with said abnormality diagnostic data, in correspondence to the inherent data common data which is common against all abnormal events irrespective of the detected abnormal event.

Claim 22 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the common data and the inherent data corresponding to detected abnormal events are stored in the common data storing section and the inherent data storing section respectively, as long as there are unused memory locations in the common data storing section and the inherent data storing section.

Claim 23 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the common data and the inherent data corresponding to a first abnormal event are stored in a first memory area which is different from a second memory area in which the common data and the inherent data corresponding to a second abnormal event are stored.

Claim 24 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the common data and inherent data corresponding to successively occurring and substantially same abnormal events, are stored in the common data and inherent data storing section for each of the substantially same abnormal events.

Claim 25 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the common data includes data indicative of a behavior of the vehicle, and wherein the inherent data includes data of a component which relates to the abnormal event.

Claim 26 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the inherent data includes data of a component which relates to the abnormal event.

Claim 27 (Previously Presented): An abnormality diagnostic system according to claim 1, wherein the inherent data and common data corresponding to successively detected abnormal events are stored in an order in which the abnormal events are detected.

Claim 28 (Currently Amended): An abnormality diagnostic system according to claim 1, wherein in addition to storing the inherent data corresponding to abnormalities in an order in which the abnormal events are detected, numbers or symbols corresponding to the order are also stored together with a diagnostic code and freeze-frame data as the inherent data.

Claim 29 (Currently Amended): An abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising:

a common data storing means for storing, as the abnormality diagnostic data for a plurality of abnormal events, common data which is common irrespective of the detected abnormal events and which includes data indicative of behavior of the vehicle; and

an inherent data storing means for storing, ~~as the abnormality diagnostic data, in~~ correspondence to the common data inherent data which is associated with and specific to a diagnostic code for ~~each of the abnormal events detected~~ and includes a data of a component which relates to the detected abnormal event.

Claim 30 (Currently Amended): An abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising:

a common data storing section configured to store, as the abnormality diagnostic data for a plurality of abnormal events, common data which is common against all abnormal events irrespective of the detected abnormal events; and

an inherent data storing section configured to store, ~~as the abnormality diagnostic data,~~ in correspondence to the common data inherent data which is associated with and specific to a diagnostic code for the detected abnormal events.

Claim 31 (Currently Amended): An abnormality diagnostic system according to claim 30, further comprising:

a memory configured to store the abnormality diagnostic data;

a processor configured to judge an abnormal event when ~~the~~ an abnormality is detected;

a selecting unit configured to select the inherent data corresponding to the judged abnormal event; and

a writing unit configured to write the selected inherent data together with the common data to the memory as the abnormality diagnostic data corresponding to the abnormal event.

Claim 32 (Previously Presented): An abnormality diagnostic system according to claim 31, wherein the common data includes data indicative of a behavior of the vehicle.

Claim 33 (Previously Presented): An abnormality diagnostic system according to claim 31, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 34 (Previously Presented): An abnormality diagnostic system according to claim 31, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 35 (Previously Presented): An abnormality diagnostic system according to claim 31, wherein the memory includes a common storing region in which each of the inherent data can be commonly stored, and

wherein the writing unit writes the inherent data to the common storing region.

Claim 36 (Previously Presented): An abnormality diagnostic system according to claim 35, wherein the common data includes data indicative of a behavior of the vehicle.

Claim 37 (Previously Presented): An abnormality diagnostic system according to claim 35, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 38 (Previously Presented): An abnormality diagnostic system according to claim 35, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 39 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the common data includes data indicative of a behavior of the vehicle.

Claim 40 (Previously Presented): An abnormality diagnostic system according to claim 39, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 41 (Previously Presented): An abnormality diagnostic system according to claim 39, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 42 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein a data length of the inherent data is constant irrespective of a difference in the abnormal events.

Claim 43 (Previously Presented): An abnormality diagnostic system according to claim 42, wherein the inherent data includes a plurality of data, and the data length of each data is constant.

Claim 44 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the inherent data includes a plurality of data, and a data length of each data is constant.

Claim 45 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the common data and the inherent data corresponding to detected abnormal events are stored in the common data storing section and the inherent data storing section respectively, as long as there are unused memory locations in the common data storing section and the inherent data storing section.

Claim 46 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the common data and the inherent data corresponding to a first abnormal event are stored in a first memory area which is different from a second memory area in which the common data and the inherent data corresponding to a second abnormal event are stored.

Claim 47 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the common data and inherent data corresponding to successively occurring and substantially same abnormal events, are stored in the common data storing section and inherent data storing section for each of the substantially same abnormal events.

Claim 48 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the common data includes data indicative of a behavior of the vehicle, and wherein the inherent data includes data of a component which relates to the abnormal event.

Claim 49 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the inherent data includes data of a component which relates to the abnormal event.

Claim 50 (Previously Presented): An abnormality diagnostic system according to claim 30, wherein the inherent data and common data corresponding to successively detected abnormal events are stored in an order in which the abnormal events are detected.

Claim 51 (Currently Amended): An abnormality diagnostic system according to claim 30, wherein in addition to storing the inherent data corresponding to abnormalities in an order in which the abnormalities are detected, numbers or symbols corresponding to the order are also stored together with a diagnostic code and a freeze-frame data as the inherent data.